

Springer

1st
edition1st ed. 2017, XV, 354 p. 71
illus., 43 illus. in color.**Printed book**

Softcover

Printed book

Softcover

ISBN 978-3-319-51294-5

£ 54,99 | CHF 77,00 | 64,99 € |

71,49 € (A) | 69,54 € (D)

Available

Discount group

Science (SC)

Product category

Monograph

Series

Lecture Notes in Mathematics

Mathematics : Number Theory

Fraczek, Markus Szymon

Selberg Zeta Functions and Transfer Operators

An Experimental Approach to Singular Perturbations

- The only book on the market which describes the evaluation of Selberg zeta functions for character deformations via the transfer operator method
- Gives a detailed description of numerical methods and analytic theories in one book
- Provides animations and over 50 color illustrations, helping the reader to get a better understanding
- Gives numerical and analytical results on new phenomena related to singular perturbations of hyperbolic Laplacians

This book presents a method for evaluating Selberg zeta functions via transfer operators for the full modular group and its congruence subgroups with characters. Studying zeros of Selberg zeta functions for character deformations allows us to access the discrete spectra and resonances of hyperbolic Laplacians under both singular and non-singular perturbations. Areas in which the theory has not yet been sufficiently developed, such as the spectral theory of transfer operators or the singular perturbation theory of hyperbolic Laplacians, will profit from the numerical experiments discussed in this book. Detailed descriptions of numerical approaches to the spectra and eigenfunctions of transfer operators and to computations of Selberg zeta functions will be of value to researchers active in analysis, while those researchers focusing more on numerical aspects will benefit from discussions of the analytic theory, in particular those concerning the transfer operator method and the spectral theory of hyperbolic spaces.

[Order online at springer.com/bookellers](https://www.springer.com/bookellers)

Springer Nature Customer Service Center GmbH

Customer Service

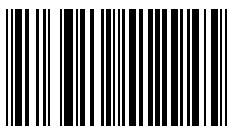
Tiergartenstrasse 15-17

69121 Heidelberg

Germany

T: +49 (0)6221 345-4301

row-bookellers@springernature.com



ISBN 978-3-319-51294-5 / BIC: PBH / SPRINGER NATURE: SCM25001

Prices and other details are subject to change without notice. All errors and omissions excepted. Americas: Tax will be added where applicable. Canadian residents please add PST, QST or GST. Please add \$5.00 for shipping one book and \$ 1.00 for each additional book. Outside the US and Canada add \$ 10.00 for first book, \$5.00 for each additional book. If an order cannot be fulfilled within 90 days, payment will be refunded upon request. Prices are payable in US currency or its equivalent.

Part of **SPRINGER NATURE**